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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,867	07/19/2000	Jack Van Oosterhout	8371-105	2653

20575 7590 12/14/2004	EXAMINER
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ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed on 10/15/04*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to the following communication: RCE filed on 10/15/04.

●Claims 1-22 are pending in application; ●Claims 20-22 are newly added; ●Claims 1, 10, and 16 are currently amended.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

2.   Claims 1, 10, 16, 20-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not provide an adequate written description of the limitations "joint print job" as recited in claims 1, 10, 16, 20-22; it does not enable one skilled in the art to make, use and/or practice the invention.

Claims Interpretation

3.   Regarding claims 1, 10, 16, 20-22, since the applicants fail to disclose an adequate written description for "joint print job"; therefore, the examiner interprets "joint print job" as "print job" for examining the claims with respect to the prior art.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.   Claims 1, 4, 9-22 are rejected under 35 U.S.C. 102(a) as being anticipated by Spohn et al (JP 411296333A).

Regarding claim 1, Spohn discloses s method for multicast document printing (dividing a whole print job into multiple segments and transmitted to plurality of printers for parallel processing/printing, abstract), the method comprising:

● receiving document data to be printed at a host (host computer, Fig. 4), wherein said document data (print jobs, Abstract and page 4, paragraphs 11-12) includes a number of copies document to be created from the document data;

●allocating a subset of (host computer includes a printer driver which allows users to divide a print job into multiple small portions/segments, Abstract, and par. 11-12, par. 27-28) the number of copies to each of at least two corresponding, separate printers (distributing divided segments to plurality of printers for parallel printing, Abstract, page 4 paragraphs 11-12 and page 5, paragraphs 15-16);

● formatting the document data into a joint print job (host computer including printer driver for formatting the document data into a print job, pars. 26-28);

● embedding (embedded routing information using a printer driver for selecting multi-cast/parallel printing parameters, par. 4, and pars. 26-28) instruction indicating for each of the corresponding printers the allocated subset of copies to be printed by that printer; and

● multicasting the joint print job (transmitting via network such as LAN, Fig. 4, page 6) the print job to the at least two separate printers (multicasting multiple divided segments to plurality of printers, par. 27-29) connected by a common network to the host.

Regarding claim 4, Spohn further discloses the method of claim 1, wherein the host is a computer (computer, fig. 1).

Regarding claim 9, Spohn further discloses the method of claim 1, wherein the transmitting the print job to at least two separate printer includes reception and temporary storage at a store-and-forward device (i.e. server and/or spooler 55, par. 25-26, fig. 2).

Regarding claims 10-15: Claims 10-15 recite limitations that are similar and in the same scope of invention as to those in claim 1 except for plurality of different storage readable medium for storing computer programs. All computers/printers have some type of computer readable medium (i.e. disk server, par. 4) for storing computer programs, hence claims 10-15 would be rejected using the same rationale as in claim 1.

Regarding claim 16, Spohn discloses a network device (network, Fig. 4), comprising: (a) a port operable to connect to a network and receiving document data to be converted into hard copy output with a predetermined number of documents to be created (client computer transmits print jobs to be printed by printers, Fig. 4, page 4); (b) a processor in communication with the port, operable to format the document data into a joint print job and instructions to at least two printers assigning a number of copies of the document to each of the at least two printers (dividing a print job of 60-pages into three 20-pages using parallel processing, page 6) wherein the sum of documents to be created by the at least two printers is substantially equal to the number of copies to be created; and to (c) a communications port operable to multicast the joint print job to printers connected to the network device by a common network (communicating via a network such as LAN or WAN, Fig. 4, page 1).

Regarding claim 17, Spohn further discloses the network device of claim 16, wherein the network device is a computer (client computer, fig. 4).

Regarding claim 18, Spohn further discloses the network device of claim 16, wherein the network device is a printer (printer, fig. 4).

Regarding claim 19, Spohn further discloses the network device of claim 16, wherein the processor is a raster image processor (RIP, page 3).

Regarding claim 20, Spohn further discloses a document printing method comprising: formatting a joint print job comprising a document to be printed (host computer for formatting a

print job, par. 22-24) and instructions specific to each of at least two printers to each print one or more copies of the document (number of pages/copies to be printed at each printer are set at host computer, par. 22-24 and par. 26-28); multicasting the joint print job over a network (network, fig. 1) coupled to each of the at least two printers.

Regarding claim 21, Spohn further discloses the method of claim 20, further comprising receiving the joint print job at one of the at least two printers (i.e. printer 20 and 24, fig. 1), locating the instructions specific to that printer within the joint print job (multicasting instruction incorporated within the print job, par. 26-28), and printing (printers 20 and 24, fig. 1) the number of copies specified in the specific instructions.

Regarding claim 22, Spohn further discloses a document printing method comprising: receiving a multicast network transmission at a networked printer (printer for receiving multicast transmission instruction from host computer, par. 26-28); determining whether the multicast network transmission contains a joint print job (print job, par. 28); and when the multicast network transmission contains a joint print job, locating instruction specific to the networked printer (multicast instruction includes pages/copies to be printed at specified printers, par. 26-28) in the joint print job and printing at least one copy of a document contained in the joint print job according to the instruction.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-3, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spohn as described in claim 1 above, and in view of Yokoyama (U.S. 6166826).

Regarding claims 1-3, 5-8, Spohn discloses a host (printer driver) which allows operator to multicast a print job to plurality of printers, but fails to disclose wherein host is application program resident in a printer, and wherein the printer is a multi-functional printer comprising of fax, copy, and scan functions

Yokoyama, in the same field of endeavor for printing, teaches discloses a multi-functional printer comprising of fax, copy, and scan functions (col. 14, lines 26-38).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Spohn as per teachings of Yokoyama to install the printer driver program of Spohn onto the storage device of Yokoyama because of a following reason: (1) to reduce hardware costs and time by implementing parallel processing (Spohn, paragraphs 10 & 15); (2) to allow operators to multicast print job at the host computer, printer, copy machine, and facsimile to increase operating flexibilities.

Therefore, it would have been obvious to combine Spohn with Yokoyama to obtain the invention as specified in claims 1-3, 5-8.

Response to Arguments

Applicant's arguments filed 10/15/04 have been fully considered but they are not persuasive.

• Regarding claims 1-4, 9-19 from previous office action, the applicants argued the examiner cited teachings by Spohn could not be located within cited reference.

In response, Spohn teaches a printer driver that incorporated within the host computer that allows users to route print information (i.e. parallel printing parameters) via dialog box (user interface) for parallel processing, also known as multi-cast and/or clusters. Once the users have selected and determined the appropriate options (i.e. parallel processing) via dialog box, the printer driver automatically divides print job into multiple small jobs and distributes to multiple printers connected in a network; therefore, the users only require to transmit the print job once, (such teachings can be found in pars. 22-28). **Please Note: parallel printing is equivalent to multicasting of documents, both involves in dividing a whole print job into multiple small segments and transmits to plurality of printers connected via a network.**

• The applicants **admitted** Spohn teaches "given a print job ABC, Spohn can decompose that job into three segments A, B, and C, and transmit A to printer 1, B to printer 2, and C to printer 3. However, the applicants argued Spohn does not teach multicasting ABC to printers 1, 2, and 3, and expecting each printer to sort out its assigned segment of the job.

In response, Spohn explicitly teaches a printer driver incorporated within the host computer which allows operator to divide a large print jobs to into a small multiple segments and then transmits the divided segments to plurality of printers (dividing a whole print job into multiple segments and transmitted to plurality of printers for parallel processing/printing, pars. 22-28). In addition, nowhere in previous and/or currently amended claims 1-22 recite the limitations "expecting each printer to sort out its assigned segment of the job" and the specification does not support such claims limitations.

• The applicant's specification discloses/teaches the same scope of invention as to those by Spohn. For example, "One embodiment of the invention is a method for multicasting of documents. The method includes receiving document data to be printed at a host, where the document data includes a number of documents to be created. The host then divides the number of documents to be created into at least two batches for at least two corresponding, separate printers. The host formats the data into a print job, embeds information for distribution of the batches to the corresponding printers into the print job and transmit the job, on page 2 of Applicant's specification. • Also, the specification also discloses "The host that performs these functions could be a printer or a computer. An example of such a device is shown in Figure 4. The network device 40 has a port 42 through which the document data is received. The port 42 communicates with the processor 44. The processor 44 could be the central processing unit in a personal computer, a raster image processor on a printer or some other type of processor. The processor then performs the task of dividing up the number of documents requested into batches, formatting the print job, embedding the distribution information and then transmitting the job. Transmission of the job will be done through a port, either the same port 42 or another port 46. In this manner, a large print job may be more efficiently processed without increasing the network traffic. For example, a printer or copier may need two hundred copies of one job. The host receives the document data. The reception could be across the network, within the same

device, such as a printer or computer, or another application or part of application running on the same device. The host would then **divide the 200 documents requested up into smaller batches**. The size of the batches depends upon the capabilities of the various printers in the cluster. If, for example, there are ten printers each with the capability to print twenty documents, the batch size will be twenty" which can be found on page 4.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

• U.S. 2002/0101604 A1 to Mima et al, discloses a method/apparatus for parallel processing, wherein the method/apparatus divides a print job into smaller groups and then transmits to plurality of printers via network to be printed to reduce time and cost.

• JP 405073232A to Yamamoto, disclose a method/apparatus for parallel processing, wherein the method/apparatus divides a large print job into smaller batches/groups and then transmits to plurality of printers via network to be printed to reduce time and cost. Translation copy is provided.

• JP 411296333A to Spohn, which used for prior art rejections; a translation copy is attached/provided along with original Japanese patent.

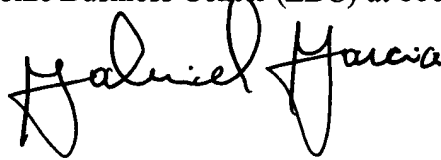• U.S. 6529286 to King, teaches networked printers for multi-casting.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L Pham whose telephone number is (703) 305-1897. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

GABRIEL GARCIA
PRIMARY EXAMINER